

EXPLORATION TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

August 9, 2006

TO: Internal Files

THRU: Stephen J. Demczak, Environmental Scientist/Engineering, Team Lead

FROM: Priscilla W. Burton, CPSSc, Environmental Scientist/Soils

RE: Minor Exploration, Consolidation Coal Company, Hidden Valley Mine,
C/015/007, Task ID #2604

SUMMARY:

Minor exploration at Hidden Valley will consist of nine rotary/core air drilled holes on the alluvial fan pediment above the reclaimed mine portals in Section 17 and 18 of Township 23, Range 6 East, SLBM. The area is portrayed on the Walker Flat USGS Quad Map and on Plate 1 of the application.

The surface is owned by Consol. Photographs of each proposed location are provided in Appendix A, Vegetation Survey. These photographs illustrate a range of conditions from desert shale range (Chipeta soils and mat saltbush dominant plant); desert cobbly loam range; semi-desert loam bench range; semi-desert limy loam range site; semi desert stony loam range sites.

Information reviewed in this memo was initially received by the Division on June 19, 2006 and revised by email on August 3, 2006.

EXPLORATION TECHNICAL ANALYSIS:

COMPLIANCE DUTIES

Regulatory Reference: 30 CFR 772.13; R645-202.

OPERATIONAL STANDARDS

Regulatory Reference: 30 CFR 772.13; R645-202-100.

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Analysis:

Topsoil Removal, Storage and Redistribution

Pre-existing jeep trails will be used. Some grading will be necessary of these trails, but no new roads will be constructed. Figure X provides a typical layout for the drill sites.

Sections 220 and 230 state that most sites on the pediment are flat and will not have topsoil removed. Instead, "brattice cloth under the rig" will be used to protect the topsoil. Where grading is required, the top six inches will be removed and stockpiled as substitute topsoil. This approach is acceptable, because the available information in the 1970 Carbon/Emery Soil Survey indicates the soils likely to be encountered are those of the Ravola-Billings-Penoyer association or the Chipeta-Badlands association, with Ravola, Penoyer and Chipeta soils present to the immediate west of the project (see Sheet 68).

According to the 1970 document, the Ravola is a good source of topsoil. The Penoyer is fair. And the Chipeta is poor. Depth to bedrock is greater than 60 inches for the Ravola and Penoyer, but 10 – 20 in the Chipeta. No extreme pH values are likely for any of the soil types. However, salinity in the form of gypsum is likely in the Chipeta soils below the topsoil horizon. And a band of calcium carbonate (lime) accumulation in the subsoil is probable in the Ravola soils. Even in the poor Chipeta soils, the typical profile has a six-inch surface "A" horizon.

The elevation of all the drill sites is 6,000 – 6,200 ft. According to the 1970 Carbon/Emery Survey, the area has an average total annual precipitation of seven inches, most of it falling in July, August, and September.

Findings:

The information provided is adequate to meet the regulatory requirements for topsoil salvage, storage and redistribution for minor exploration.

RECLAMATION STANDARDS

Regulatory Reference: 30 CFR 772.13; R645-202-200.

Analysis:

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Revegetation

Photographs of each proposed location are provided in Appendix A, Vegetation Survey. These photographs illustrate a range of conditions from desert shale range (Chipeta soils and mat saltbush dominant plant); desert cobbly loam range; semi-desert loam bench range; semi-desert limy loam range site; semi desert stony loam range sites.

Soils are extremely susceptible to sheet erosion and wind erosion as the photograph of drill site HV-06-09 illustrates. The proposed reclamation treatments described in Sec. 240 include roughening compacted soils, grading on the contour, broadcast seeding, and raking. There is no plan to use mulch or tackifier.

The plan is to conduct exploration between August 15, 2006 and December 15, 2006. Sections 220 and 240 both state that each drill site will be reclaimed contemporaneously within two weeks of completion the hole.

Findings:

The permittee has met the minimum requirements of this section.

RECOMMENDATIONS:

The applicant has met the minimum requirements for conducting minor exploration. This Letter of Intent is recommended for approval.